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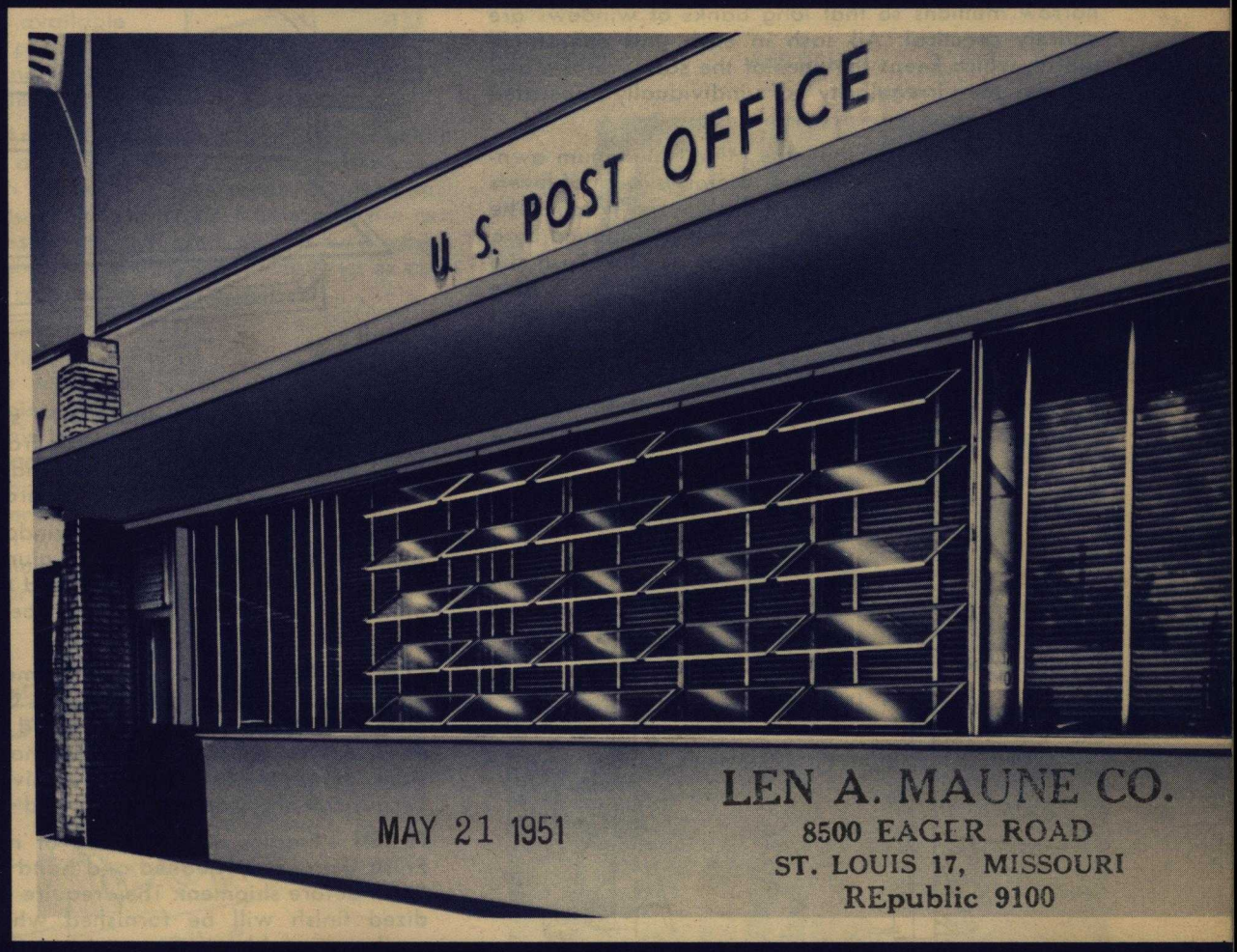
miami
ALUMINUM AWNING WINDOWS



WINDOW DIVISION
INDUSTRIAL MACHINE TOOL CO. INC.
FENTON, MICH.

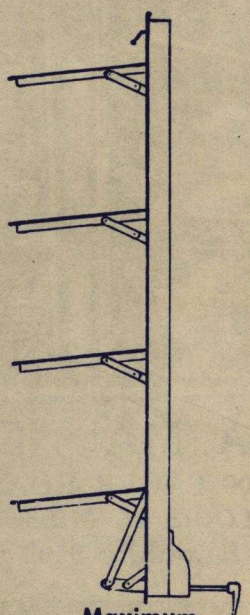
miami

ALUMINUM AWNING WINDOWS

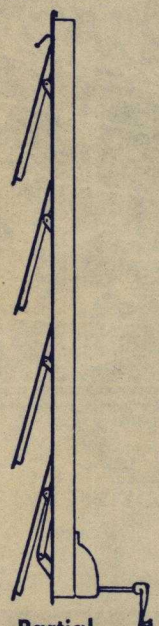
The awning type window is finding increasing acceptance for use in monumental, commercial, institutional and residential buildings as well as schools where it has been successfully used for many years. The Miami aluminum awning window provides all of the recognized advantages such as controlled light and ventilation and improved protection, plus the beauty and durability of aluminum and a convenient positive mechanical operating and locking device.

APPEARANCE — The Miami awning window is a handsome unit with large horizontal sash which are especially well adapted to the contemporary architectural styles. Units are easily combined by means of strong narrow mullions so that long banks of windows are entirely practical. All sash in each unit operate in unison which keeps the lines of the sash uniform and avoids the irregularity of individually operated windows.

OPERATION — The sash of the Miami aluminum awning window are operated by a simple system of levers with all linkage concealed in the channel jambs. The motion is smooth and quiet with power supplied by a simple crank and gear attached to one jamb at the sill. The top rail of each sash is attached to a slide bar thus reducing the number of moving parts and adding strength to the entire assembly.



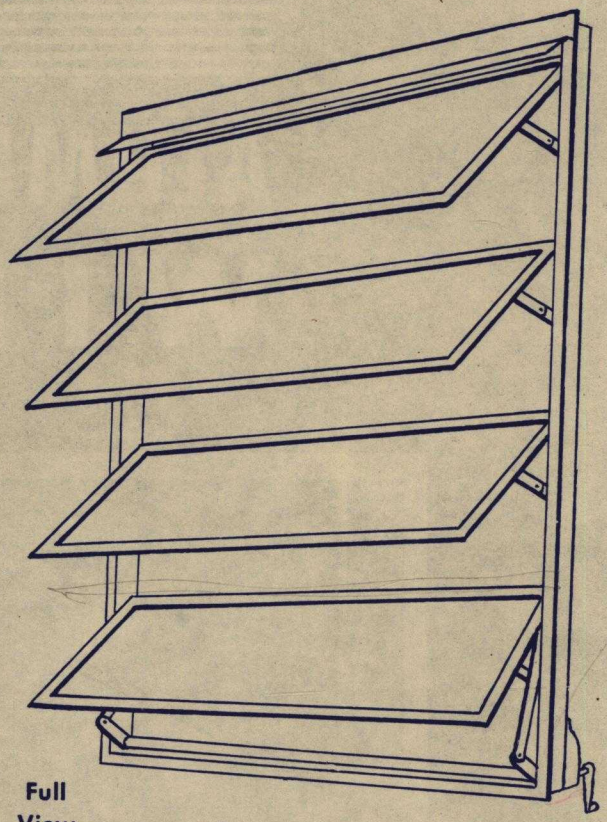
Maximum Opening



Partial Opening

WEATHERTIGHT — Each sash of the Miami awning window closes with a tight two point weathering contact against the member below. A similar two point contact at the jamb provides a complete water and wind tight seal entirely around the sash. An ample drip mould is provided above top operating sash.

SELF LOCKING — The operating mechanism automatically locks the sash in any position, open or closed. No other locking device is necessary.



Full View

SCREENING — Screens and storm sash may be installed in the inside reveal of the frame. They are entirely clear of the operating mechanism and do not interfere in any way with the operation of the sash.

MATERIALS — Miami awning windows, frames and sash are constructed of 63S-T5 aluminum alloy. The extruded members are straight and true and approximately ⅛ in. thick at any point, being held to close tolerances.

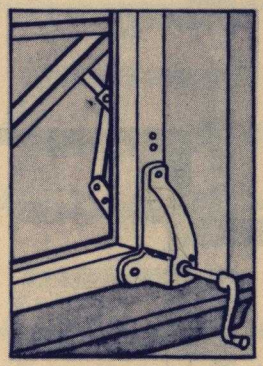
CONSTRUCTION — Corners of frames and sash are welded true and perfectly aligned. Operating mechanism is of aluminum alloy concealed within the frame. Positive synchronized support is maintained on both sides of vents. This is an exclusive Miami feature because of the patented concealed cross shaft.

FINISH — Frames and sash are of natural aluminum finish thoroughly cleaned and hand buffed to a satin finish before shipment. They require no painting. Anodized finish will be furnished when specified. An easily removable spray coat is available as a protective coating against mortar, plaster, etc.

ERECTION — Windows should be set plumb and true in opening, shimmed and braced as necessary to prevent racking and misalignment. Entire perimeter of window should be carefully caulked where frame meets structural jambs.

GLAZING — Glazing is from the exterior by means of glazing clips and aluminum sash putty or by means of metal moulding screwed to sash with glass bedded in aluminum sash putty. Glazing beads also can be furnished.

OPERATING HARDWARE — Miami windows are opened, closed and held secure in any position by a single unit. This is a worm gear operator enclosed in a die cast aluminum case attached to one jamb at the sill with a small crank projecting over the sill. Sector gear and connecting link are of 24S-T5 aluminum alloy. Worm, shaft sector axis and retainer pin are of stainless steel. These metals, both highly resistant to corrosion, work smoothly in mechanical combination without sticking or galling.

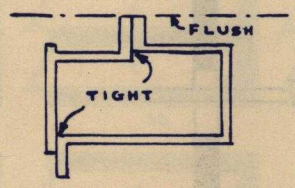


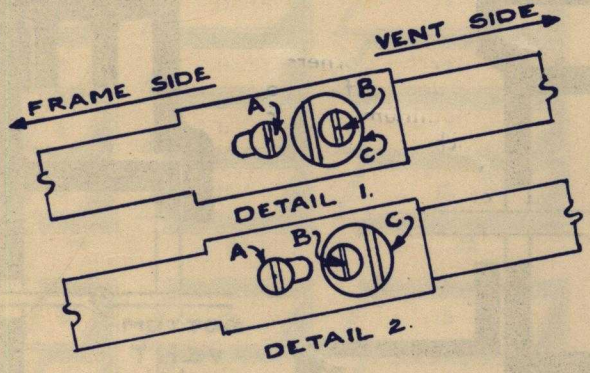
Operator Position

FOR DEEP REVEALS—Where deep reveals would otherwise prevent the rotation of the crank without an impractical extension of the crank spindle, a special operating unit is available with the crank projecting up and to the window side at angles at 45 degrees.

ADJUSTMENTS—An important feature of Miami aluminum awning windows are the positive micromatic adjustments provided on each side of all vents to permit each sash to be brought into contact with the frame and the next sash below to assure tight fit and perfect weathering. This is accomplished by inserting small eccentrics or cams in the individual rods actuating the sash.

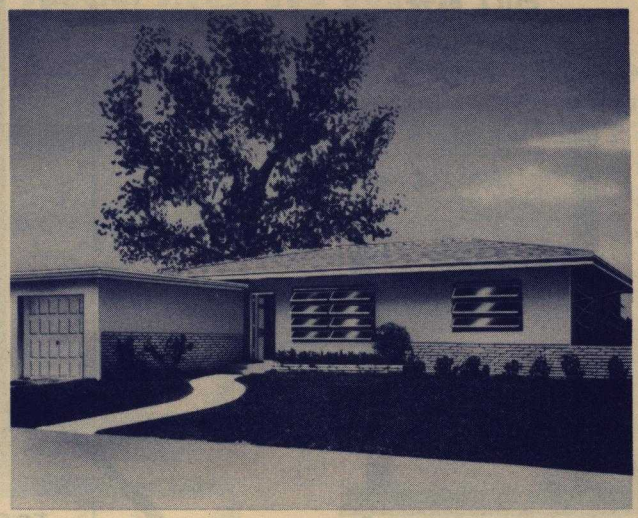
When all sash are in perfect adjustment, tight contact with frame will be established at points indicated at right. This in turn will assure contact along entire top and bottom of horizontal members of the sash. Each Miami window is individually adjusted before leaving factory.





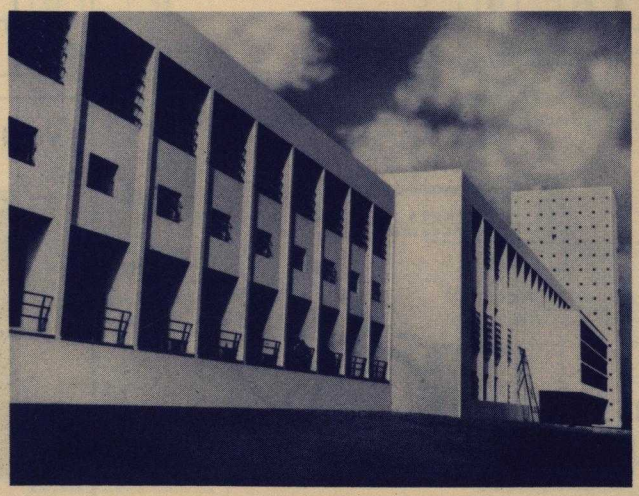
PROCEDURE

1. To adjust, loosen screws "A" and "B." Turn eccentric cam "C" for desired adjustment. Tighten screw "A" to hold adjustment. Tighten screw "B." In adjusting, cam "C" may be turned either clockwise or counterclockwise.
2. When slot in eccentric cam "C" is on **frame** side of screw "B" as illustrated in detail 1, vent is at maximum outward adjustment. When slot is on **vent** side of screw "B" as in detail 2 vent is at maximum inward adjustment. Total range of adjustment is ¼ inch.



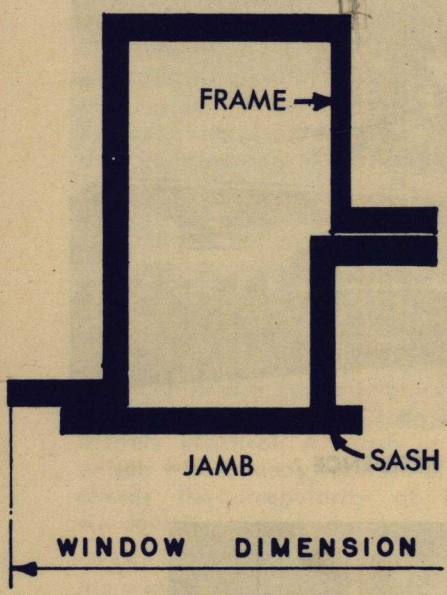
RESIDENCE

BUILDING

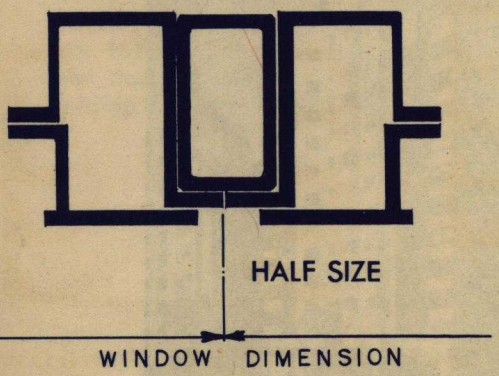


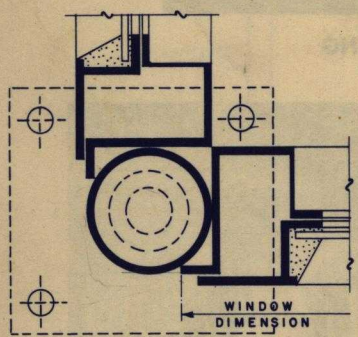
SCHOOL

FULL SIZE SECTIONS

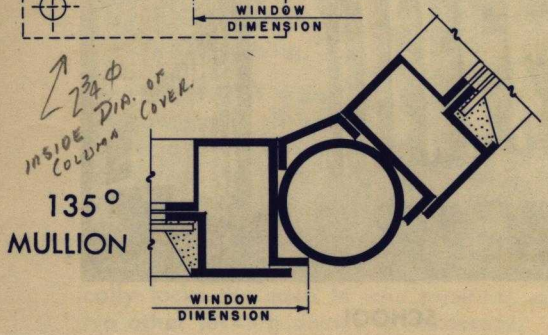


MULLION DETAILS

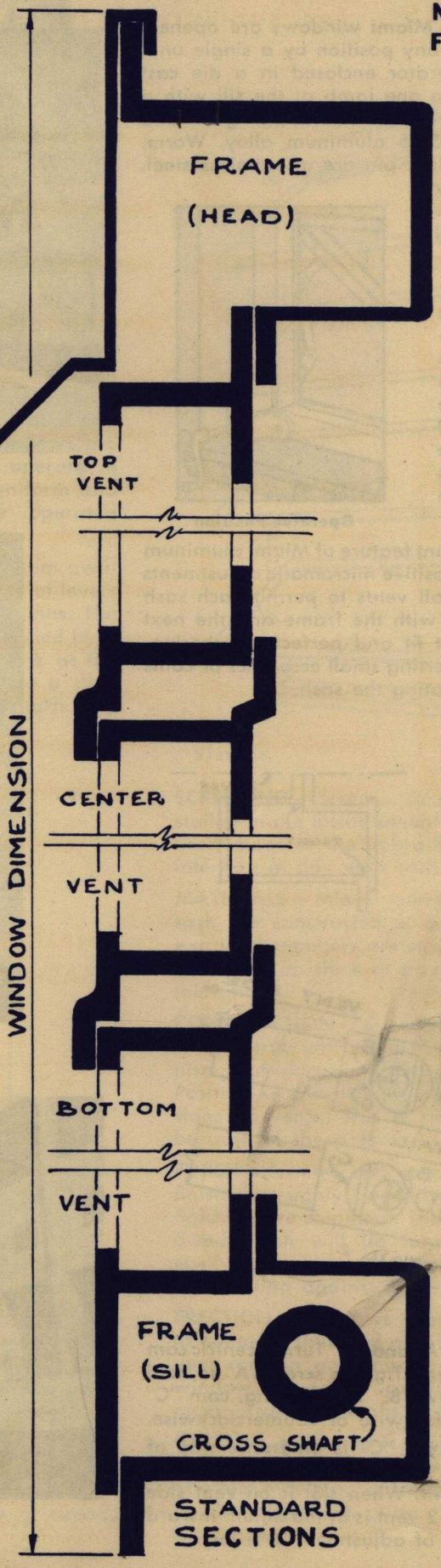




RIGHT ANGLE MULLION

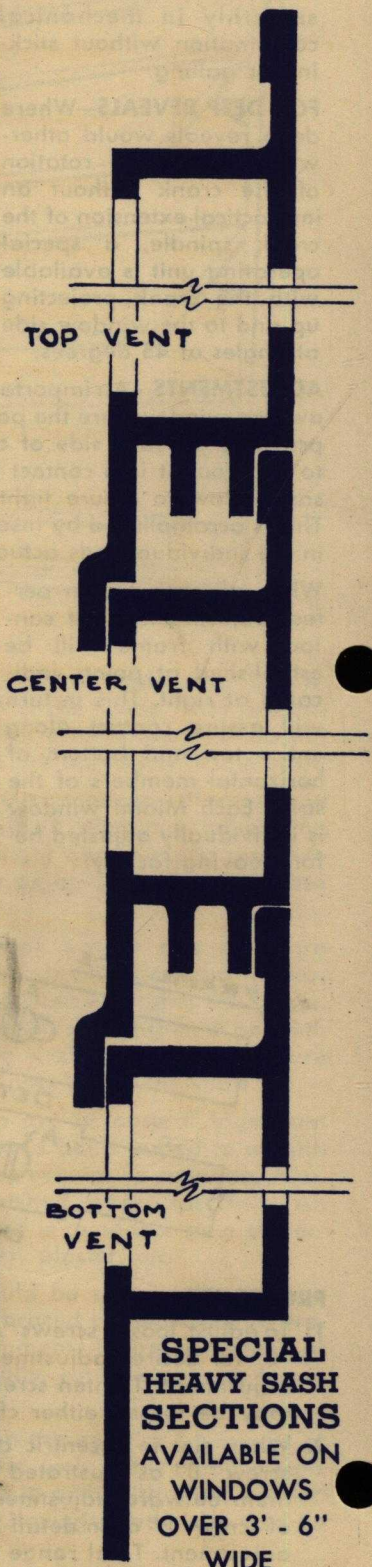


135° MULLION



STANDARD SECTIONS

NOTE THE DOUBLE SEAL FEATURE OF THE WINDOW



SPECIAL HEAVY SASH SECTIONS AVAILABLE ON WINDOWS OVER 3' - 6" WIDE

STANDARD SIZES

For modular and special sizes, see page 6

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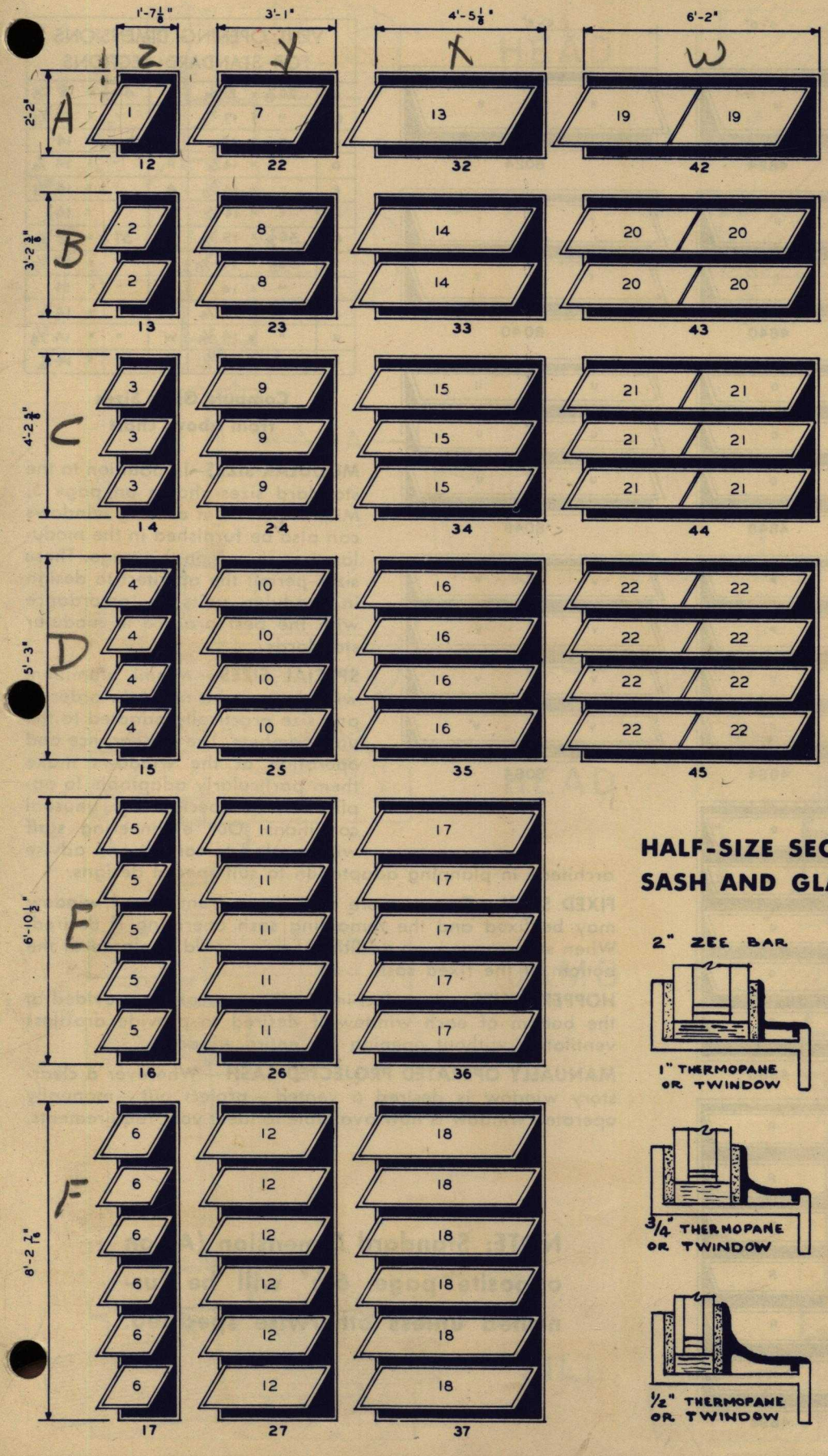
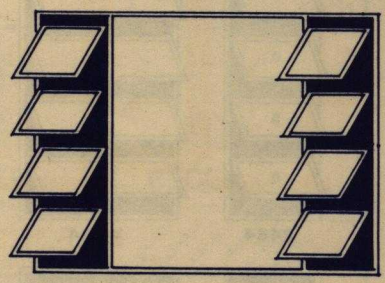


VENT OPENING DIMENSIONS FOR STANDARD SECTIONS			
1	15¼ x 21⅝	12	33⅛ x 14 61/64
2	" x 16 9/16	13	49¼ x 21⅝
3	" x 14 53/64	14	" x 16 9/16
4	" x 14	15	" x 14 53/64
5	" x 14 61/64	16	" x 14
6	" x 14 61/64	17	" x 14 61/64
7	33⅛ x 21⅝	18	" x 14 61/64
8	" x 16 9/16	19	34⅞ x 21⅝
9	" x 14 53/64	20	" x 16 9/16
10	" x 14	21	34⅞ x 14 53/64
11	" x 14 61/64	22	34⅞ x 14

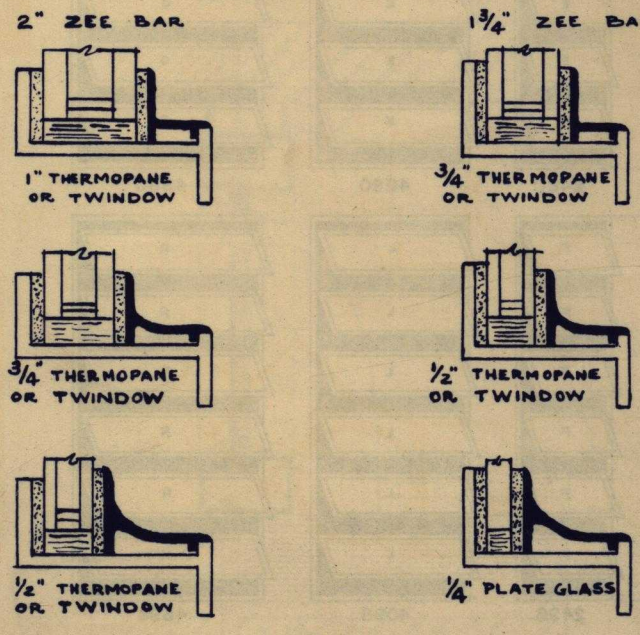
Compute Glass Sizes from above chart

FIXED PANEL SECTIONS

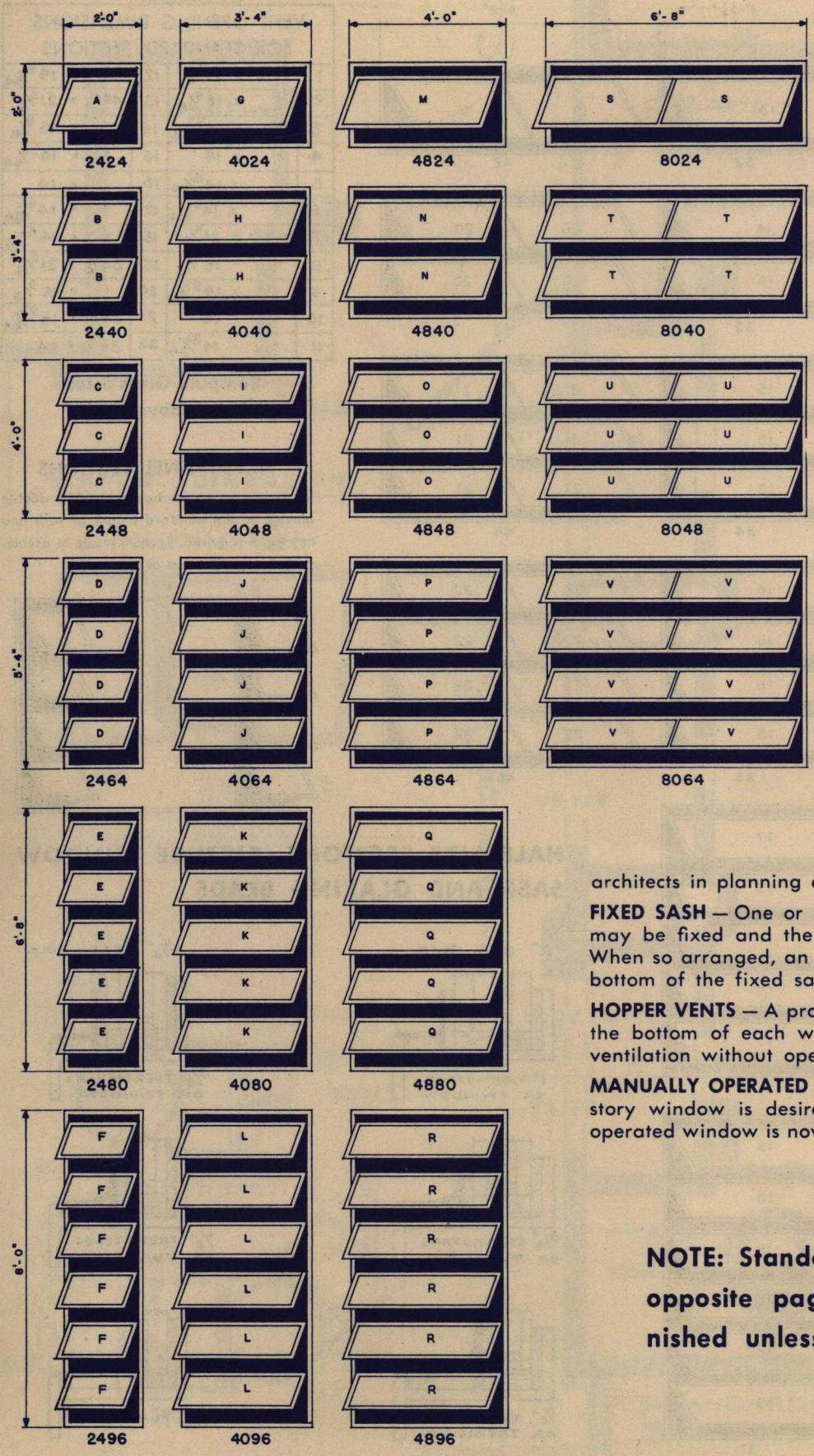
Stationary panels can be furnished for double glazing in any standard height of sash and any width required. Sections made to accommodate any thickness of glass.



HALF-SIZE SECTIONS, PICTURE WINDOW SASH AND GLAZING BEADS



MODULAR SIZES



VENT OPENING DIMENSIONS FOR STANDARD SECTIONS			
A	20⅛ x 19⅝	M	44⅛ x 19⅝
B	" x 17⅜	N	" x 17⅜
C	" x 14	O	" x 14
D	" x 14¼	P	" x 14¼
E	" x 14⅜	Q	" x 14⅜
F	" x 14½	R	" x 14½
G	36⅛ x 19⅝	S	37⅞ x 19⅝
H	36⅛ x 17⅜	T	" x 17⅜
I	" x 14	U	" x 14
J	" x 14¼	V	" x 14¼
K	" x 14⅜	W	" x 14⅜
L	" x 14½	X	" x 14½

Compute Glass Sizes from above chart

MODULAR SIZES—In addition to the standard sizes shown on page 5, Miami aluminum awning windows can also be furnished in the modular sizes shown on this page. These sizes permit the architect to design in modular units in accordance with the best practice in modular standards.

SPECIAL SIZES — Miami aluminum windows can be made to order any size practically adapted to the unit members. The appearance and operation of the windows make them particularly adaptable to application in special and unusual conditions. Our engineering staff will be glad to consult and advise architects in planning adaptation to suit special designs.

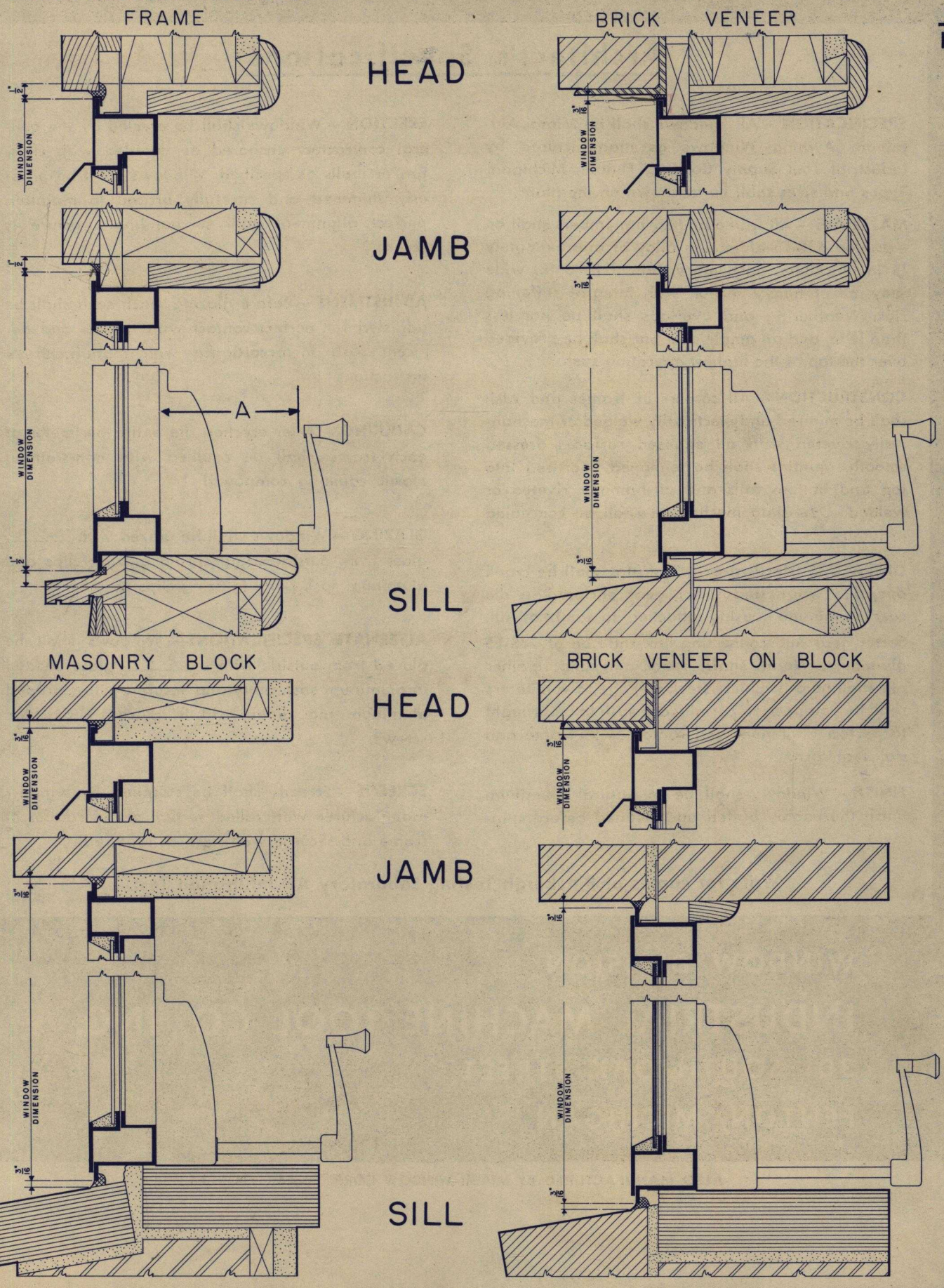
FIXED SASH — One or more sash down from top of window may be fixed and the remaining sash operating if desired. When so arranged, an additional drip mould is placed at the bottom of the fixed sash.

HOPPER VENTS — A project-in hopper vent can be provided at the bottom of each window if desired to provide draftless ventilation without opening the entire window.

MANUALLY OPERATED PROJECTED SASH — Wherever a clear-story window is desired a vented — project out — manually operated window is now available to meet your requirements.

NOTE: Standard Dimension (A) on opposite page. 6½" will be furnished unless otherwise specified.

INSTALLATION DETAILS



miami aluminum awning windows

Architect's Specifications

SPECIFICATION — All windows shall be Miami Aluminum Awning Windows as manufactured by Industrial Tool Supply Co. Inc., Fenton, Michigan. Types and sizes shall be as shown on the plans.

MATERIALS — All frame and sash members shall be extruded 63S-T5 aluminum alloy of approximately ⅛ in. thickness. Sash more than 3 ft. 6 in. wide may be of heavy section with integral stiffening ribs. Weathering and overlaps shall be not less than ¼ in. and an ample drip bar shall be provided over the top of the highest operating sash.

CONSTRUCTION — All corners of frames and sash shall be mitered and electrically welded or mechanically riveted with all exposed surfaces dressed smooth. Muntins shall be tennoned, mortised into top and bottom rails and air-hammer riveted or welded. Operating mechanism shall be concealed in jambs.

OPERATORS (Hardware) — Operator shall be crank operated worm and sector gear enclosed in die cast aluminum housing attached to jamb at sill. Sector gear and connecting link shall be of 24S-T5 aluminum. Worm, shaft, sector axis and retainer pin shall be of stainless steel. Linkage to ventilators shall be equipped to permit each sash to be brought to perfect alignment and contact with frame and adjacent sash.

FINISH — Windows shall be in natural aluminum finish thoroughly buffed and cleaned before shipment.

ERECTION — Windows shall be erected by the general contractor, anchored as detailed with clips, fins or mulls as specified. Windows shall be properly shimmed and carefully braced to maintain perfect alignment until surrounding structure is secure.

ADJUSTMENT — Before glazing, each sash shall be adjusted for perfect contact with frames and adjacent sash in accordance with manufacturer's instructions.

CAULKING — After erection the entire perimeter of each frame shall be caulked with non-staining elastic caulking compound.

GLAZING — Windows shall be glazed with _____ glass from outside using spring glazing clips and aluminum sash putty (glazing clips by others).

ALTERNATE SPECIFICATIONS — Windows shall be glazed from outside with _____ glass bedded in aluminum sash putty and secured with extruded aluminum mouldings held in place by machine screws.

SCREENS — Screens shall be supplied by window manufacturer with rolled section set in rabbet in frame and secured with clips, as required.

Write for copies of Pittsburgh Testing Laboratory Air Infiltration Test

LITHO IN U. S. A.
MASUDA OFFSET CO.
DEARBORN, MICH.

WINDOW DIVISION

INDUSTRIAL MACHINE TOOL CO. INC.

301 SOUTH OAK STREET

FENTON, MICHIGAN

ALSO MANUFACTURED BY MIAMI WINDOW CORP., MIAMI, FLORIDA

MAY 21 1951

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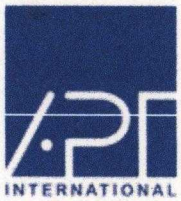

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